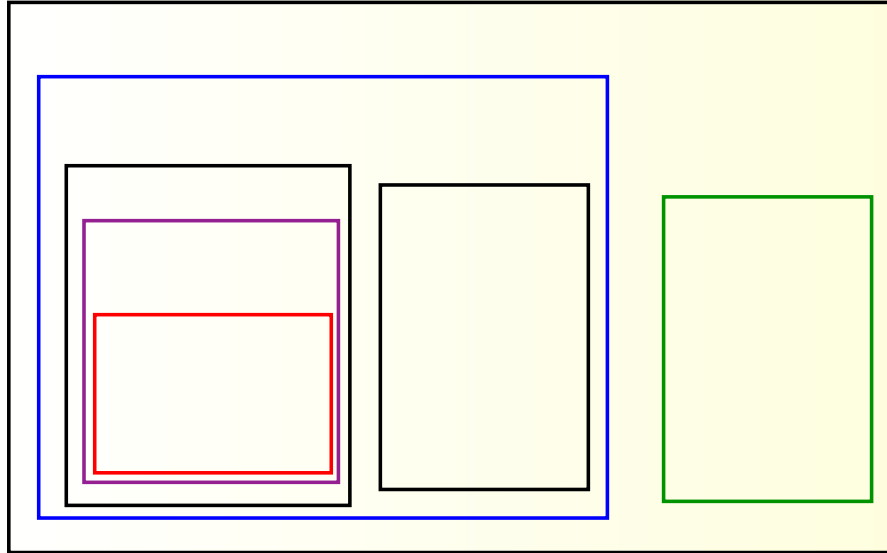


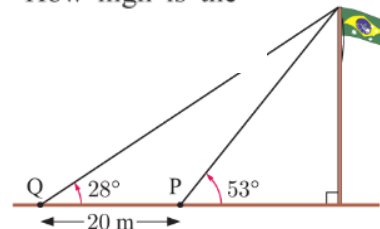
Warm Up # 7-2

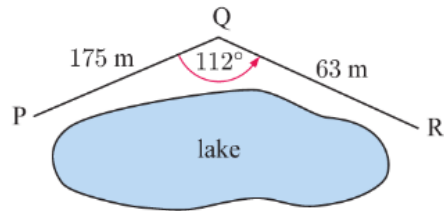
Fill in the sets and subsets with the following words:
Integers, Irrationals, Reals, Natural Numbers,
Complex Numbers, Rationals, Imaginary Numbers.



EXERCISE 151 HW Questions: p. 475

- 1 Rodrigo takes a sighting to the top of the flagpole from point P. He then moves 20 metres further away from the flagpole to point Q and takes a second sighting. The information is shown in the diagram. How high is the flagpole?



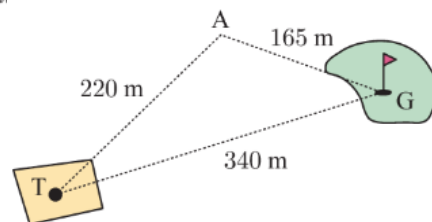
2

A park ranger walks along a trail from P to Q and then to R.

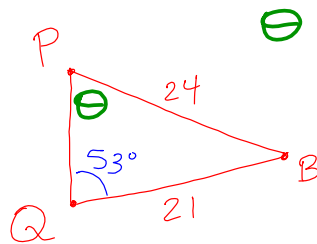
What is the distance in a straight line from P to R?

3

A golfer played his tee shot 220 m to point A. His ball was then 165 m from the green. The distance from tee to green is 340 m. Determine the number of degrees the golfer was off line with his tee shot.

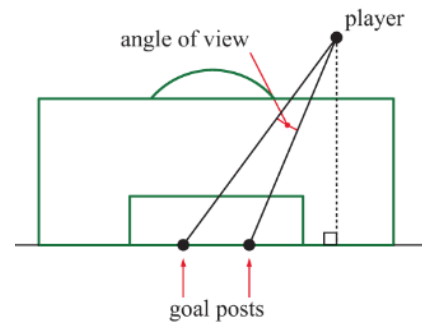


- 4 Two yachts P and Q are anchored at different locations at sea. A beacon at B determines that P and Q are 24 km and 21 km away respectively. The yacht at Q measures B and P to be 53° apart. What angle would the yacht at P measure between B and Q?

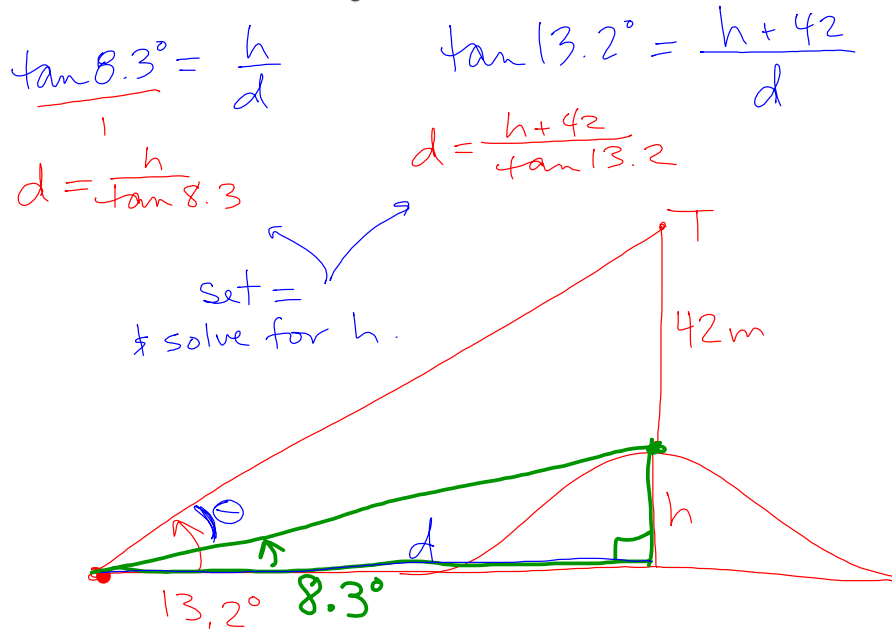


$$\frac{\sin \theta}{21} = \frac{\sin 53^\circ}{24}$$

- 5 A football goal is 5 metres wide. When a player is 26 metres from one goal post and 23 metres from the other, he shoots for goal. What is the angle of view of the goals that the player sees?

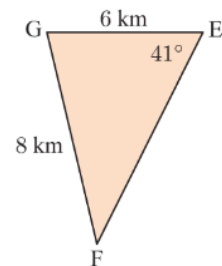


- 6 A tower 42 metres high stands on top of a hill. From a point some distance from the base of the hill, the angle of elevation to the top of the tower is 13.2° and the angle of elevation to the bottom of the tower is 8.3° . Find the height of the hill.

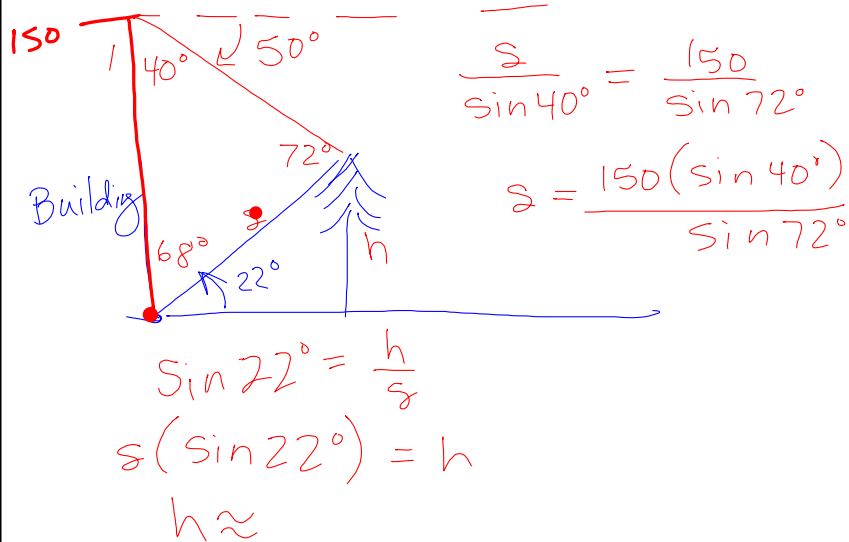


- 7 A large property needs to be sprayed with insecticide prior to being used for agriculture. An incomplete sketch of the property is shown.

- Calculate angle EFG.
- Determine the cost of spraying the property if insecticide costs £400 per square kilometre.



- 8 From the foot of a building I have to look upwards at an angle of 22° to sight the top of a tree. From the top of the building, 150 metres above ground level, I have to look down at an angle of 50° below the horizontal to sight the tree top.
- a How high is the tree? b How far from the building is this tree?

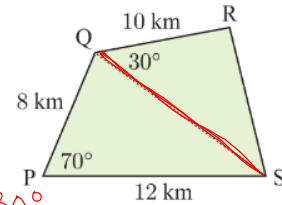


- 9 Two observation posts are 12 km apart at A and B. A third observation post C is located such that angle CAB is 42° and angle CBA is 67° . Find the distance of C from both A and B.

- 10** Stan and Olga are considering buying a sheep farm. A surveyor has supplied them with the given accurate sketch. Find the area of the property, giving your answer in:

a km^2

b hectares.



$$a) A_{\triangle PQS} + A_{\triangle QRS}$$

$$\frac{1}{2}(8)(12)\sin 70^\circ + \frac{1}{2}(QS)(10)\sin 30^\circ$$

$$= 48\sin 70^\circ + \frac{5}{2}(QS)$$

$$QS = \sqrt{8^2 + 12^2 - 2(8)(12)\cos 70^\circ}$$

$$QS = \sqrt{208 - 192\cos 70^\circ}$$

$$QS \approx$$

- 11** Thabo and Palesa start at point A. They each walk in a straight line at an angle of 120° to each other. Thabo walks at 6 km h^{-1} and Palesa walks at 8 km h^{-1} . How far apart are they after 45 minutes?

Classwork:

Refer to pgs. 212 - 213

Do 7A p. 214 # 1 - 8

HW:

Finish Classwork (today's)

‡ last Tuesday's

11E.3 and 11E.4

1 & 2

1